

Testing and Storing your Nembutal Sample

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The Importance of Testing

Barbiturate drug-testing is important. No one wants a failed attempt. The emotional cost of having made this most difficult of decisions, and having said good-bye to loved ones, should not be exacerbated by further worry that the drug may fail.

The decision to die is not one that anyone wants to take risks with. The principal of harm minimization (i.e. ensuring that the substance is what it says it is and minimizing the risk of 'something going wrong') is paramount.

While some will prefer to test their drugs themselves, others will want the 'gold standard' provided by a commercial laboratory. Either way, the testing the purity of internet pentobarbital powder is advised. Testing liquid samples is less important (because they are packaged in a sterile, tamper-proof bottle), but makes sense if the drug has been kept for a long time period..

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Taking a Sample for Testing

The tests described in this Chapter require only a very small sample of the powder or veterinary liquid to be tested ($\sim 0.5\text{gm}$ of powder or 6ml of veterinary liquid is enough to carry out all of the tests). A sample of veterinary liquid Nembutal for testing can be obtained as follows:

The veterinary packaging is designed so that variable amounts of the drug can be withdrawn from the 100ml bottle using a syringe and hypodermic needle without breaking the sterile seal. Although there is no need for the Nembutal to be sterile for a peaceful death, the drug will keep longer if the seal is not damaged and the solution remains sterile.

The bottle should only be fully opened (by breaking the seal and removing the rubber stopper) when the drug is either ready to be used or it is to be discarded.



Fig 18.1: Removing a sample of Nembutal



To take a test sample of the liquid, remove the outer plastic cap from the bottle cap (if present) and then use a small knife, nail scissors or screwdriver to remove the small central circular metal piece covering the rubber stopper (Fig 18.1) that you will find underneath the plastic cap. The rubber stopper will then be exposed.

When the rubber stopper is exposed, the needle of the hypodermic can be pushed through the stopper into the bottle. Use the hypodermic syringe supplied with the Exit Nembutal Test Kit (or an equivalent). With the needle in place, invert the bottle and carefully withdraw the syringe plunger until there is liquid in the syringe.

Qualitative vs. Quantitative Testing?

Qualitative testing shows ‘Yes’ or ‘No’ if the sample being tested is Nembutal. Qualitative testing uses monoclonal antibodies to indicate whether the Barbiturate Nembutal is present even in minute quantities.

NOTE: Qualitative testing gives NO information on the purity of the sample. A Qualitative test only confirms that Nembutal is present. This is also called the qualitative ‘Spot’ Test.

In contrast, Quantitative testing establishes the purity of the sample. Quantitative testing therefore shows if a sample has deteriorated over time, or from poor storage.



Fig 18.2: Weighing out Nembutal powder for testing

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A Quantitative test will also show if a sample has been contaminated in some way. If this is the case, the sample in question may need to be discarded (or the dose increased to compensate for the deterioration or adulteration).

Quantitative testing of a sample that has been stored for many years (or is from an uncertain source) is useful for peace of mind.

The Qualitative ‘Spot’ Test

The Exit Spot Test Kit is a quick screening test that can be quickly undertaken to establish that Nembutal powder from China or liquid Nembutal from countries such as Peru or Mexico is, in fact, Nembutal.

The test can be done at home and as stated previously, only a very small sample is needed for the test (~0.1gm of powder, or 0.1ml of veterinary liquid). The Exit Qualitative Test Kit contains a sealed dip-card cassette and 0.5ml hypodermic syringe.

For veterinary liquid Nembutal, the steps are as follows:

1. Use the syringe provided to remove a small sample from the bottle of liquid to be tested using the method shown in the videos ‘Testing Nembutal - Obtaining the Sample’.
2. Remove the Nembutal test cassette from its foil and remove the plastic cap to expose the absorbent tip. Saturate the absorbent tip of the dip-card with the veterinary liquid you have removed with the syringe, and replace the plastic cap.
3. At ~5 minutes, read the results of the test off the dip-card. After 10 minutes the results cannot be relied upon.

To use the Exit Spot Test for powdered Nembutal, the steps are as follows:

1. Use a clean knife to separate out a small sample of the powder (see Fig 18.2).
2. Dissolve a small amount of powder in a few ml of distilled water. Saturate the absorbent tip of the dip-card, and proceed as above as per step 3 to read the results on the cassette.

Reading the Qualitative Test Results

Positive Result:

ONE red line in the control region (C). NO line appears in the test region (T).

The absence of a test line indicates a positive result for Nembutal.

Negative Result:

TWO lines appear. A red line in the control region (C), and a red or pink line in the test region (T).

Invalid Result:

NO line appears in the control region (C).

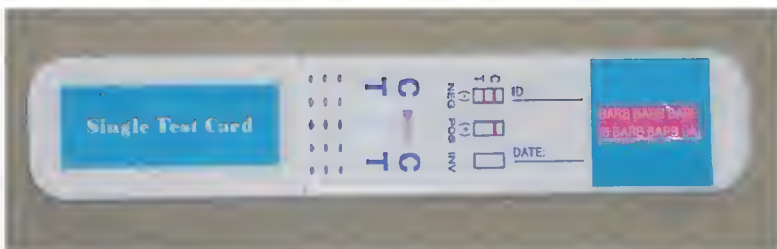


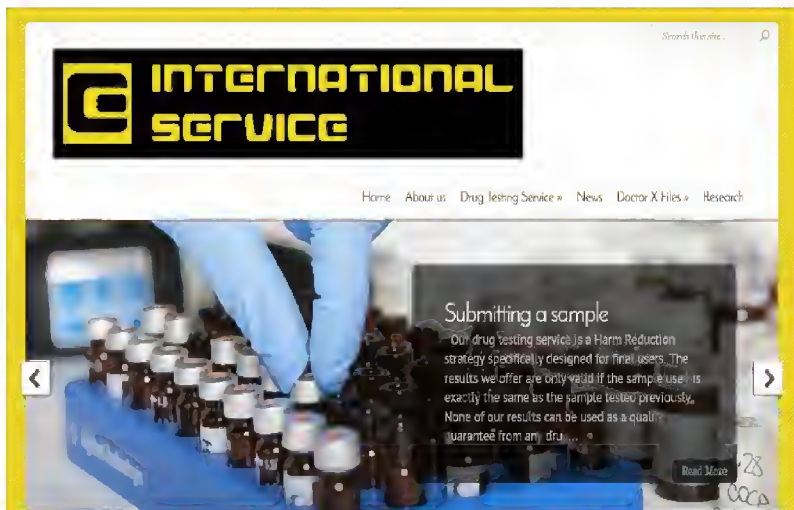
Fig 18.3: A positive 'Spot' Test

Commercial Quantitative Testing



The ‘gold standard’ test for the purity of a sample of sodium pentobarbital is by Gas Chromatography and Mass Spectroscopy (GC/MS). The equipment needed to carry out these tests is expensive and requires skilled operators. The process also requires a pure sample of the substance being tested so that comparisons can be made.

The problem of finding laboratory services prepared to test the purity of ‘illegal’ drugs has long been a challenge for those using recreational party drugs from questionable sources. It is well established that drug-testing of this nature promotes safer drug-taking - within a framework of ‘harm minimisation’.



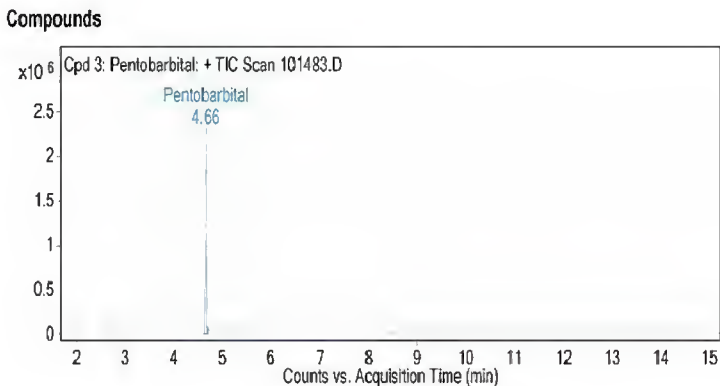
Energy Control website - Submitting a Sample

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However the testing of end of life drugs carries the additional risk for the laboratory that their analysis could be considered a breach of law that prohibits “assisting a suicide”, This concern has meant that although many laboratories around the world regularly provide testing for government and policing agencies, they consistently refuse individuals seeking analysis of “white powder, believed to be sodium pentobarbital”!

The progressive Spanish laboratory, Energy Control (EC) provides a very useful analysis service for recreational drugs and in 2016 Exit contacted them about possible extension of their service to include Nembutal. After some consideration they agreed, using the ‘harm minimising’ argument. Clearly a person seeking a reliable death could be seriously “harmed” if poor quality drugs were used, leading to a failed attempt, and a seriously damaged individual.

With the acquisition of a standard sample in late 2016, EC began operating the first quality laboratory Nembutal testing service for members of the public in early 2017.



GC Scan result for Chinese powder Nembutal (>99%)

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Exit greatly appreciates the service operated by this laboratory and their work has been invaluable in monitoring the quality of the sodium pentobarbital on the market. For background see:

<http://www.aljazeera.com/news/2016/05/spain-free-lab-testing-street-drugs-160510112235494.html>

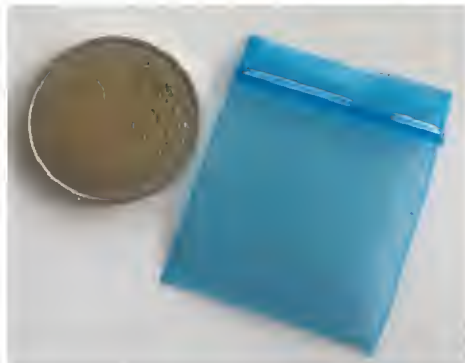
Submitted samples can be forwarded to EC by mail. Results are then delivered by email. Further details on sample submission can be found on the EC website.

<http://energycontrol-international.org/drug-testing-service/submitting-a-sample/>

Details:

- Sample: Sodium pentobarbital (this must be specified as it is not listed on the drop-down menu)
- Sample size (powder): ~0.1 gm (a tenth of a gram)
- Sample size (liquid): 1-2 ml
- Cost: €70 (€120 if test data is required to be forwarded)
- Payment: Bitcoin, PayPal or bank transfer
- Results: Forwarded by email
- PGP encryption available
- Time for results ~ 10 days

Plastic *Ziploc* bags to forward powder for assay



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Exit Store 'Nembutal Sampler Kit' for Energy Control assay specimens

Samples needed for assay by Energy Control

The facilitate sample collection Exit offers a kit from its on-line store. The kit consists of x2 qualitative Nembutal screening cassettes, syringes and needles for removing liquid samples for analysis from sterile veterinary bottles, two 1.5 ml liquid sample containers for forwarding liquid to the laboratory and plastic *Ziploc* bags for powder samples.

Testing Nembutal using Infrared Spectroscopy

Infrared spectroscopy is a technique in which light in the infrared part of the spectrum is directed onto a substance for analysis. Different frequencies of this radiation are selectively absorbed and the spectra provide a unique fingerprint of the substance under analysis. While the process has been used for many years the equipment needed to irradiate the sample, collect and analyse the resulting spectrum has been bulky and expensive. A recent development by Israeli tech start-up Consumer-Physics has led to the development of the handheld SCiO molecular sensor, a device that makes this technology accessible to the general public.



SCiO sensor with '00' capsules of powder for testing

The full potential of this device in testing samples of sodium pentobarbital is yet to be determined. Initial tests have been positive, in being able to detect that the powder *is* Nembutal, *and* that there are no other significant contaminants. Exit is developing the necessary App by testing a large number of samples of Nembutal (many of which have also had GC laboratory testing) and recording the resultant spectra.

NOTE: The accompanying video shows the process

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The accuracy of the test, and the ability to detect sample purity will depend on the database of spectra collected.

The testing process for a powder sample is simple. Install the SCiO software onto your phone or laptop. Login, and WiFi link and calibrate the sensor as shown in the software. Fully pack a '00' gelatine capsule with the finely divided powder for testing - this will require ~ 600 mg of sodium pentobarbital. Weigh the capsule and place it into the accompanying reflective small objects holder that accompanies the detector, then switch on the ExitTest2 App, from the Applet selection. Position the molecular scanner above the holder and press the displayed 'scan' button.



A flash of visible light from the detector is noticed and the screen indicates the completion, then analysis of the scan. The recorded data is compared with stored spectra, and the results immediately made available on the phone/ iPad screen. The result display for a good sample of Nembutal powder is shown in the diagram. This can then be emailed or stored. If the analysed spectrum comes back as “*unrecognisable*”, further tests should be carried out.

NOTE: Tests on liquid samples of Nembutal are currently being carried out and details will be published when available.

NOTE: The full potential of this system for assessing end of life drugs is still being investigated by Exit

The Max Bromson Quantitative Test

There are three quantitative tests that can be carried out at home. Together, they are called the Max Bromson Quantitative Test. Together, will give a reliable indication of the sample purity.

The Max Bromson Quantitative Test Kit can be obtained at:

<http://www.exitinternationalstore.com>

Each Exit Max Bromson Quantitative Test Kit contains:

- Digital scales with accuracy of ± 0.001 gm
- Glass Melting Point capillary tube (x2)
- Digital probe thermometer (0°C to 250°C)
- Spot test cassettes (x6)
- 2ml micro-pipettes (x6)
- 3ml syringes (x6)
- 25G hypodermic needles (x4)



Fig 18.4: Exit 'Max Bromson Triple Test' Kit
(Spot test cassettes not shown)

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Note: In May 2016 the consumables provided in the Max Bromson Kit were doubled, so that more than one sample could be tested.

The results of these tests on a sample of Nembutal powder (or liquid) will give a reliable indication as to whether the sample has undergone significant deterioration, or has been contaminated or adulterated.

The 3 Tests are:

- a) The Acid Conversion Test (ACT)
- b) The Melting Point Test (MPT)
- c) Dilution Purity Testing (DPT)

a) The Acid Conversion Test (ACT)

Nembutal (sodium pentobarbital) is in the form of a soluble salt. When dissolved in water the salt forms a clear alkaline liquid (with pH ~10). This explains the bitter taste.

Conversion into the insoluble crystalline form can be achieved by acidifying the solution and driving the pH down, so that an insoluble precipitate is formed.

If the original salt sample is 100% pure sodium pentobarbital, the weight of the precipitate formed should be 90% of the original (the ratio of the molecular weights of both substances). In other words if one dissolve half a gram (500mg) of 100% pure Nembutal powder, acidifies, separates, dries and weighs the precipitate, one would expect a weight of 450mg.

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Method: Place the scales provided on a flat surface and check the calibration with the 10gm weight included. (Use the tweezers to move items on and off the scales)

Weigh out approximately 500mg (1/2 gram) of powder for testing. Record the accurate weight and dissolve the sample in approximately 50ml of distilled water.

When the sample is fully dissolved, use a syringe from the kit to drip in 5ml of white vinegar. Note the cloud of white precipitate that forms with each drop. Let the precipitate settle.

Weigh and record the weight of the dry laboratory filter paper provided in the Kit. You will then need a small plastic funnel. Fold the paper so that it fits inside the small plastic funnel. Pour the mixture (liquid and precipitate) into the funnel so that it drains through the filter paper. To ensure that all the precipitate has been washed into the filter paper, rinse the container containing the mixture using a syringe of distilled water.

Repeat the process by adding another 5 ml of vinegar to the clear filtrate. Again let the precipitate that forms settle, then pour through the same filter paper and rinse the precipitate again. Repeat until the further addition of vinegar leads to no visible precipitate.

Place the filter paper in an oven set at low heat (~100°C), and allow the filter paper to dry. Re-weigh the filter paper plus the dried precipitate.

Calculate the weight of the total precipitate by subtracting the weight of the filter paper.

The % purity of the original sample is obtained by:
$$(\text{Weight of salt} / \text{Weight of precipitate}) \times 90$$

Note: If one is testing the purity of a sample of veterinary liquid Nembutal, remove 6ml of liquid for testing and measure the exact volume using one of the graded pipettes. Add distilled water and proceed as described above.

Note: The quoted concentration on the bottle of the Nembutal to be tested is usually 65mg/ml. The original weight of the salt would be $6 \times 65 = 390\text{mg}$, and if pure, would precipitate 350mg.

Set aside the dried pentobarbital crystals for use in the melting point test (MPT).

Note: The ACT Test is shown in the video '*Purity Testing for Nembutal Powder*' but that the volumes used in the video differ slightly from the text description. In the video, only 200mg of powder was used for the test, and the process of serial dilution using small 5ml vinegar samples was not employed. This process of serial dilution and filtration avoids the possibility of re-absorption of the precipitate by over dilution, and the use of a larger (500mg) sample gives greater ACT test accuracy.

b) The Melting Point Test (MPT)

A pure test sample is expected to have a clearly-defined specific melting point. The melting point can be determined by using a thin-walled glass capillary tube to heat a small sample and then recording the temperature at which the sample melts (and changes colour).

For Nembutal, the test must be carried out on the free acid - not the sodium salt. Items needed for the test include a sealed glass capillary tube, thermometer (mercury or digital) with a range $> 150^{\circ}\text{C}$, and a glass container of cooking oil that can be heated slowly on the stove.

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Regardless of whether one has the powdered salt (from China), or a bottle of liquid solution of the salt, the process is as follows:

Place some of the dry pentobarbital crystals from the previous acid conversion test into the capillary and suspend the capillary in the cooking oil. Keep the glass tip of the capillary close to the sensing tip of the digital thermometer. Heat the oil slowly on the stove while stirring the oil continuously. Watch for the point at which the melting of the crystals occurs. The crystals should change colour quickly from white to transparent at $131^{\circ}\text{C} \pm 1^{\circ}\text{C}$.

A video of the MPT is shown: ‘The Melting Point Test for Nembutal’.

Note: In the video a magnetic laboratory stirrer is used to ensure a uniform temperature of the cooking oil being heated.

c) The Dilution Purity Test (DPT)

The DPT test looks for the point at which a sample of Nembutal (powder or liquid) becomes so dilute as to not give a ‘positive’ on the qualitative ‘Spot test’ cassette. Adulterated or degraded Nembutal samples will require less dilution to reach this point.

Accurately weigh out 200mg of powder to be tested. Dissolve this powder in ~20ml of distilled water taken from one of the 2 liter distilled water bottles - label this bottle #1.

Return the 20ml of water with the dissolved substance back into the 2 liter container. Re-seal and tip up and down several times to mix the sample thoroughly.

Re-open the 2 liter container and insert the test strip of a spot test cassette into the liquid. Wait and read the result. A clear positive should be recorded. A clear positive is a single clear line at 'C' on the cassette, with no line forming at the 'T' level (see Fig 18.3).

Use a 3ml syringe attached to a 2ml micro-pipette to take exactly 2ml of liquid from this 2 liter container and add this to the second 2 liter distilled water container - label this bottle #2.

Reseal and again invert to mix thoroughly. Finally, use a new cassette to test bottle #2. Another positive should be recorded, although a faint line may now be noticed at 'T'. A clear 'C' confirms that the test sample has a purity of better than 70%.

Note: To test veterinary Nembutal liquid, use a syringe with a 25G needle. Remove exactly 3ml of the sample and add this directly into the first distilled water bottle - proceed as above.

A video of the DPT is available: See 'The DIY Home Nembutal Purity Test'. <https://youtu.be/Qq4P8qZOqhM>

Max Bromson Quantitative Test Results

Home purity testing requires care and the results obtained can sometimes be difficult to interpret. The benefit of the Max Bromson Triple Test is that it enables three tests to be carried out.

A spurious or unexplained result from one test can then reasonably be disregarded if the other two tests return an adequate result.

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For example, a good purity result on the ACT (ie. better than 70%), with a MPT of 130°C would give confidence that ingestion of 10gm of this sample will bring about a peaceful death. The test that is most likely to give spurious results (false negative or positive) is the DPT as there are external factors that cannot be totally controlled, eg. the age and quality of the test cassettes.

If, however, a sample fails all three tests, it would be wise to source an alternative sample, or seek a laboratory assay.

Additional Home Quantitative Tests

Water Content Test (WCT)

The presence of water in any significant amount in a sample of Nembutal powder is an adverse finding. Nembutal powder will readily absorb water from the air. This is why it should always be kept tightly sealed in an air-tight container.

To determine water content in Nembutal powder, accurately weigh out and record ~1 gm of the powder and place it in a laboratory oven with the temperature controlled at 100°C. After 30 minutes in the oven, let the powder cool in a desiccator and re-weigh to establish the percentage of water content. The percentage should be < 5%

Acid Titration Testing (ATT)

Reliable testing to quantify the presence of adulterants or degradation requires sophisticated equipment. A useful titration test can be carried out at home, but careful attention to detail is essential to ensure an accurate result.

This method involves accurately weighing out a small sample of powder (~200mg +/- 0.5mg), drying it in an oven at 100°C to determine the presence of any significant amount of water, then dissolving it in distilled water and, finally, titrating with 0.1N hydrochloric acid. Methyl Orange is used as an indicator to determine the point at which the pH rapidly decreases.

A detailed step-by-step account of this process has been provided to Exit by 'htveld' and is available on the 'Prime Posts' section of the Exit Forums. See: <http://bit.ly/29LeP6a>

Exit is also grateful for the work of 'chriskay' & 'billeboeuf' in the Exit Forums <<http://peacefulpillforums.com/>> for their suggested refinement to the quantitative testing procedures described in this chapter.

Testing Nembutal - Summary

- Qualitative testing is simple screening test carried out using the Spot Test barbiturate strips. This provides no information on sample purity.
- Quantitative testing shows a samples purity.
- The gold standard test is laboratory testing using gas chromatography (GC). Energy Control laboratory in Spain offers this service
- Home quantitative testing can be carried out using the Exit Bromson Test kit, but results are much less accurate.
- There are three tests that the kit enables - the most useful are the acid conversion and melting point tests (ACT & MPT).
- The full potential of the new SCiO infrared scanner in providing qualitative and quantitative information on a Nembutal sample is still being assessed.

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Fig 18.5: Exit Laboratory GC Machine

Mobile Nembutal Testing

The demand for reliable, confidential testing has grown significantly with the ready availability of powdered Chinese Nembutal. Legal problems have prevented the establishment of a testing service where members would forward a small sample of the powder (or veterinary liquid) to our laboratory for assay.

In 2012 a mobile testing facility (laboratory van) operated for a short period of time to make testing equipment available to Exit members. For legal reasons, Exit did not take possession of the substance being tested. Ownership remained with the person carrying out the tests.

Storage & Shelf Life of the Barbiturates

The soluble barbiturate salts (ie. sodium pentobarbital - Nembutal) are very stable drugs. This is a particularly useful property of Nembutal, as it means the drug can be safely stored many years without losing its potency. This is true for both powdered and liquid forms of Nembutal.

In powdered form, sodium pentobarbital should be kept tightly-sealed, away from any contamination or exposure to oxygen or atmospheric moisture. The product from China is usually supplied loosely packed in a small plastic sachet, so re-packaging is important. There are two recommended procedures for long term storage.

The Storage of Powder Nembutal

Method 1

Obtain a suitable glass container with a airtight screw top. The size should just accommodate the powder, with little extra space for air. If testing is planned, remove ~500mg, then tightly seal the container before wrapping it in aluminium foil (to protect it from the light) and store it in a cool place. The refrigerator (~4°C is fine).

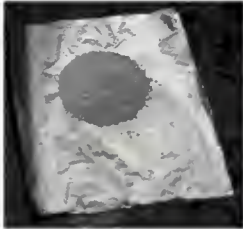
Method 2 (Courtesy of Alan Davies)

An alternative strategy is to wrap the sample (minus 500mg if testing is planned) in aluminium foil, and place the package in a metallized Mylar (PET) bag. The bag is then vacuum sealed using a home vacuum food storage unit (eg. a Foodsaver vacuum sealer) sold at stores such as Amazon, Argos or Walmart.

<http://www.foodsaver.com/vacuum-sealers/counter-top-vacuum-sealers/>

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Fig 18.6



10gm of powder in foil



Powder wrapped in foil

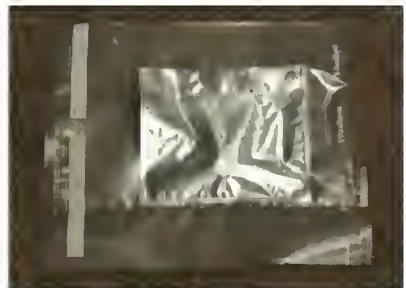


Place in Mylar storage bag

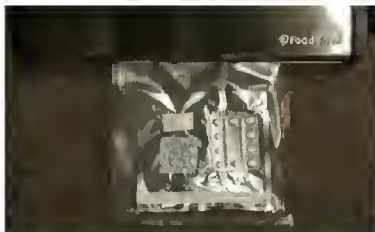


Silica Gel
moisture
absorbing
sachet

O₂ absorbing
sachet



Place the vacuum sealed Mylar bag
inside a PE 'Food Saver' bag



Above: Vacuum seal the Mylar bag
inside a plastic PE bag along with
moisture and oxygen absorbing sachets

Right: The finished package ready for
storage



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Pint size Mylar bags (10cm x16cm or 4"x6") are ideal and provide ideal oxygen and moisture protection for the sample. The sealed Mylar bag is itself then vacuum packed inside a standard polyethylene food serve bag (Quart size, ~20cm x 30cm or 8"x 12"), along with moisture (silica gel) and oxygen absorbing sachets. The finished sample is small and can then be conveniently stored in a cool place (< 20°C).

It will be obvious if the seal is broken as the package will become pliable, at which point the outer vacuum package can be replaced.

Note: Extracting all the air from Mylar bags before heat-sealing can sometimes prove difficult because of the smooth finish of the bag. A solution to this is shown on YouTube:

<http://www.youtube.com/watch?v=r9dzaeC0hG0>

Note: Moisture and oxygen-absorbing sachets and Mylar bags are available at a small cost on the Internet.

See: *<https://www.usaemergencysupply.com/>*

Note: It has been suggested that metoclopramide anti-emetic tablets can be vacuum-sealed along with the sachets of Nembutal powder. However, it is not clear if the shelf life of the anti-emetic would be increased with this storage method.

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The Storage of Liquid Nembutal

Veterinary liquid comes in sealed, sterile glass 100ml bottles. It is best not to disturb the seal on the bottle until it is needed.

Do not break the seal or decant the liquid into another container as this will expose the drug to the air. Store the original bottles in a cool dark place. Refrigeration is fine, but do not freeze as the bottle can break.

The liquid should be clear and colourless. Any coloration or precipitation of the liquid means that further testing and assay will be required.

Note about Nembutal capsules, tablets and long term storage

Note: Pharmaceutical grade Nembutal capsules or tablets are no longer produced. Those who have access to these drugs and are planning their use, should be aware that because of their age, these drugs are likely to have deteriorated, and should be tested.

Note: Previous editions of *The Peaceful Pill eHandbook* outlined a method of long-term storage that involved the conversion of the salt (sodium pentobarbital, CAS No 57-33-0) to the free acid (pentobarbital CAS No 76-74-4).

However, the success of long-term, vacuum-packing of the soluble salt has made this process unnecessary, and it has now been removed from the *eHandbook*.